



### 3. 테이블 스페이스 레벨로 EXPORT PUMP / IMPORT

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순서

1. shm2 DB에 ts30000 테이블 스페이스를 생성
2. scott 유저에서 emp30000 테이블을 생성한
3. ts30000 테이블 스페이스를 export 하고 PROD DB에 import
4. 잘 import 되었는지 확인하기

#### 0. PROD DB와 shm2 DB가 올라왔는지 확인(올라오지 않았을 경우 startup으로 올리기)

```
[shm2:~]$ ps -ef | grep pmon
oracle  10833      1  0 10:07 ?        00:00:00 ora_pmon_PROD
oracle  11277      1  0 10:08 ?        00:00:00 ora_pmon_shm2
oracle  11500    8878  0 10:09 pts/2    00:00:00 grep pmon
```

```
[shm2:~]$ ps -ef | grep pmon
oracle  10833      1  0 10:07 ?        00:00:00 ora_pmon_PROD
oracle  11277      1  0 10:08 ?        00:00:00 ora_pmon_shm2
oracle  11500    8878  0 10:09 pts/2    00:00:00 grep pmon
```

#### 1. shm2 DB에서 ts30000 이라는 테이블스페이스 생성

```
shm2 SYS >
create tablespace ts30000
datafile '/u01/app/oracle/oradata/shm2/disk1/ts30000.dbf' size 10m;
```

```
shm2 SYS >
shm2 SYS > create tablespace ts30000
datafile '/u01/app/oracle/oradata/shm2/disk1/ts30000.dbf' size 10m;
Tablespace created.
```

#### 2. shm2 DB의 SOCTT유저로 접속해서 ts30000 테이블 스페이스에 emp30000테이블 생성

- a. 생성하기

```
shm2 SYS >
connect scott/tiger

shm2 SCOTT >
create table emp30000
( empno number(10),
  ename varchar2(10),
  sal number(10) )
tablespace ts30000;
```

```
shm2 SYS >
shm2 SYS > connect scott/tiger
Connected.
shm2 SCOTT >
shm2 SCOTT > create table emp30000
( empno number(10),
  ename varchar2(10),
  sal number(10) )
tablespace ts30000; 2    3    4

Table created.
```

#### b. 데이터 insert

```
shm2 SCOTT >
insert into emp30000
select empno, ename, sal
from emp;
```

```
shm2 SCOTT > insert into emp30000
select empno, ename, sal
from emp; 2    3

14 rows created.
```

### 3. ts30000 테이블 스페이스를 read only로 변경합니다.

#### a. read only로 변경하기

```
shm2 SCOTT >
connect / as sysdba

shm2 SYS >
alter tablespace ts30000 read only;
```

```
shm2 SCOTT > connect / as sysdba
Connected.
shm2 SYS >
shm2 SYS > alter tablespace ts30000 read only;

Tablespace altered.
```

#### b. 잘 변경되었는지 확인하기

```
shm2 SYS >
```

```
select t.name, d.enabled
  from v$tablespace t, v$datafile d
 where t.ts# = d.ts#;
```

```
shm2 SYS > select t.name, d.enabled
             from v$tablespace t, v$datafile d
             where t.ts# = d.ts#; 2    3

NAME                                ENABLED
-----                                -
SYSTEM                              READ WRITE
SYSAUX                              READ WRITE
UNDOTBS                             READ WRITE
TS7100                              READ WRITE
TS8100                              READ WRITE
TS450                               READ WRITE
TS20000                             READ WRITE
TS30000                             READ ONLY

8 rows selected.
```

#### 4. ts30000 테이블 스페이스를 export 합니다.

```
$ expdp directory=shm2_dir dumpfile=ts30000.dmp transport_tablespace=y tablespaces=ts
```

----- 유저이름과 패스워드 입력하기 -----

Username : sys as sysdba

Password : oracle

=====

directory=datapump\_dir : 덤프파일이 생성될 위치

transport\_tablespace=y : 이걸 입력해줘야 테이블스페이스로 이관 가능

```
[shm2:~]$ expdp directory=shm2_dir dumpfile=ts30000.dmp transport_tablespace=y tablespaces=ts
```

Export: Release 11.2.0.1.0 - Production on Mon Feb 26 10:59:00 2024

Copyright (c) 1982, 2009, Oracle and/or its affiliates. All rights reserved.

Username: sys as sysdba

Password:

Connected to: Oracle Database 11g Enterprise Edition Release 11.2.0.1.0 - Production  
With the Partitioning, OLAP, Data Mining and Real Application Testing options

Legacy Mode Active due to the following parameters:

Legacy Mode Parameter: "transport\_tablespace=TRUE" Location: Command Line, Replaced w  
Legacy Mode has set reuse\_dumpfiles=true parameter.

Starting "SYS"."SYS\_EXPORT\_TRANSPORTABLE\_01": sys/\*\*\*\*\* AS SYSDBA directory=shm2\_

Processing object type TRANSPORTABLE\_EXPORT/PLUGTS\_BLK

Processing object type TRANSPORTABLE\_EXPORT/TABLE

Processing object type TRANSPORTABLE\_EXPORT/POST\_INSTANCE/PLUGTS\_BLK

Master table "SYS"."SYS\_EXPORT\_TRANSPORTABLE\_01" successfully loaded/unloaded

\*\*\*\*\*

```

Dump file set for SYS.SYS_EXPORT_TRANSPORTABLE_01 is:
/home/oracle/pump_shm2/ts30000.dmp
*****

Datafiles required for transportable tablespace TS30000:
/u01/app/oracle/oradata/shm2/disk1/ts30000.dbf
Job "SYS"."SYS_EXPORT_TRANSPORTABLE_01" successfully completed at 10:59:18

```

```

[shm2:~]$ expdp directory=shm2_dir dumpfile=ts30000.dmp transport_tablespace=y tablespaces=ts30000
Export: Release 11.2.0.1.0 - Production on Mon Feb 26 10:59:00 2024
Copyright (c) 1982, 2009, Oracle and/or its affiliates. All rights reserved.
Username: sys as sysdba
Password:

Connected to: Oracle Database 11g Enterprise Edition Release 11.2.0.1.0 - Production
With the Partitioning, OLAP, Data Mining and Real Application Testing options
Legacy Mode Active due to the following parameters:
Legacy Mode Parameter: "transport_tablespace=TRUE" Location: Command Line, Replaced with: "transport_tablespace=ts30000"
Legacy Mode has set reuse_dumpfiles=true parameter.
Starting "SYS"."SYS_EXPORT_TRANSPORTABLE_01": sys/***** AS SYSDBA directory=shm2_dir dumpfile=ts30000.dmp tablespaces=ts30000 reuse_dumpfiles=true
Processing object type TRANSPORTABLE_EXPORT/PLUGTS_BLK
Processing object type TRANSPORTABLE_EXPORT/TABLE
Processing object type TRANSPORTABLE_EXPORT/POST_INSTANCE/PLUGTS_BLK
Master table "SYS"."SYS_EXPORT_TRANSPORTABLE_01" successfully loaded/unloaded
*****
Dump file set for SYS.SYS_EXPORT_TRANSPORTABLE_01 is:
/home/oracle/pump_shm2/ts30000.dmp
*****
Datafiles required for transportable tablespace TS30000:
/u01/app/oracle/oradata/shm2/disk1/ts30000.dbf
Job "SYS"."SYS_EXPORT_TRANSPORTABLE_01" successfully completed at 10:59:18

```

#### b. 잘 생성되었는지 확인하기

```

[shm2:~]$ cd pump_shm2
[shm2:pump_shm2]$

[shm2:pump_shm2]$ ls
dept_pump.dmp emp612_pump.dmp emp_pump.dmp export.log import.log scott.dmp ts

[shm2:pump_shm2]$ pwd
/home/oracle/pump_shm2

```

```

[shm2:~]$ cd pump_shm2
[shm2:pump_shm2]$
[shm2:pump_shm2]$ ls
dept_pump.dmp emp612_pump.dmp emp_pump.dmp export.log import.log scott.dmp ts20000.dmp ts30000.dmp
[shm2:pump_shm2]$
[shm2:pump_shm2]$ pwd
/home/oracle/pump_shm2

```

### ▲ 만약에 아래와 같이 에러가 발생 했을 때 조치사항

```

UDE-04031: operation generated ORACLE error 4031
ORA-04031: unable to allocate 16 bytes of shared memory ("shared pool","select obj#,t

```

```
UDE-04031: operation generated ORACLE error 4031
```

```
ORA-04031: unable to allocate 16 bytes of shared memory ("shared pool","select obj#,type#,ctime,mtim...", "SQLA", "tmp")
```

- 원인 : Shared pool이 작아서 메모리를 할당할 수 없다는 것! 그럼 memory\_target 파라미터를 재설정 해줘야함

- 해결방법 : PROD DB 쪽에 memory\_max\_target을 1024m 로 늘리고 memory\_target을 1024m로 늘립니다.

```
PROD SYS >

alter system set memory_max_target=1024m scope=spfile;
alter system set memory_target=1024m scope=spfile;
shutdown immediate
startup
```

- export를 시도했었기 때문에 pump파일이 생성될 위치에 생성이 되었는지 미리 확인하고 다시 export하기

## 5. shm2 DB에서 export하면서 생성된 데이터 파일인 ts30000.dbf를 PROD DB의 data file이 있는 위치에 copy 합니다.

- a. pump 쓰지 않고 export 했을 때와 동일한 방식!

```
[shm2:~]$
cp /u01/app/oracle/oradata/shm2/disk1/ts30000.dbf /u01/app/oracle/oradata/PROD/disk1/
```

```
[shm2:~]$ cp /u01/app/oracle/oradata/shm2/disk1/ts30000.dbf /u01/app/oracle/oradata/PROD/disk1/ts30000.dbf
[shm2:~]$
```

## 6. shm2 DB의 ts30000.dmp 파일을 PROD DB의 pump 디렉토리로 copy 합니다.

```
[shm2:~]$
cp /home/oracle/pump_shm2/ts30000.dmp /home/oracle/pump_prod/ts30000.dmp
```

```
[shm2:~]$ cp /home/oracle/pump_shm2/ts30000.dmp /home/oracle/pump_prod/ts30000.dmp
[shm2:~]$
```

## 7. shm2 DB에 ts30000 테이블 스페이스를 import 합니다.

- a. import 하기 전에 PROD DB의 SYS 계정 패스워드가 무엇인지 확인하기
- b. import 하기 전에 PROD DB의 scott 계정이 있는지 확인하고 dba 권한이 있는지 확인

```
PROD SYS > connect scott/tiger
Connected.

PROD SCOTT >
PROD SCOTT >
PROD SCOTT > select * from session_roles;

ROLE
-----
DBA
SELECT_CATALOG_ROLE
HS_ADMIN_SELECT_ROLE
EXECUTE_CATALOG_ROLE
HS_ADMIN_EXECUTE_ROLE
DELETE_CATALOG_ROLE
EXP_FULL_DATABASE
IMP_FULL_DATABASE
DATAPUMP_EXP_FULL_DATABASE
```

DATAPUMP\_IMP\_FULL\_DATABASE  
GATHER\_SYSTEM\_STATISTICS

ROLE

-----

SCHEDULER\_ADMIN

```
PROD SYS > connect scott/tiger
Connected.
PROD SCOTT >
PROD SCOTT >
PROD SCOTT > select * from session_roles;

ROLE
-----
DBA
SELECT_CATALOG_ROLE
HS_ADMIN_SELECT_ROLE
EXECUTE_CATALOG_ROLE
HS_ADMIN_EXECUTE_ROLE
DELETE_CATALOG_ROLE
EXP_FULL_DATABASE
IMP_FULL_DATABASE
DATAPUMP_EXP_FULL_DATABASE
DATAPUMP_IMP_FULL_DATABASE
GATHER_SYSTEM_STATISTICS

ROLE
-----
SCHEDULER_ADMIN

12 rows selected.
```

### c. ts30000 테이블 스페이스 import

```
[PROD:~]$ impdp directory=datapump_dir dumpfile=ts30000.dmp transport_datafiles='/u01
```

Import: Release 11.2.0.1.0 - Production on Mon Feb 26 11:08:19 2024

Copyright (c) 1982, 2009, Oracle and/or its affiliates. All rights reserved.

Username: sys as sysdba

Password: oracle <--- 입력하는 것 보이지 않으므로 주의하기

```
Connected to: Oracle Database 11g Enterprise Edition Release 11.2.0.1.0 - Production
With the Partitioning, OLAP, Data Mining and Real Application Testing options
Master table "SYS"."SYS_IMPORT_TRANSPORTABLE_01" successfully loaded/unloaded
Starting "SYS"."SYS_IMPORT_TRANSPORTABLE_01": sys/***** AS SYSDBA directory=datap
Processing object type TRANSPORTABLE_EXPORT/PLUGTS_BLK
Processing object type TRANSPORTABLE_EXPORT/TABLE
Processing object type TRANSPORTABLE_EXPORT/POST_INSTANCE/PLUGTS_BLK
Job "SYS"."SYS_IMPORT_TRANSPORTABLE_01" successfully completed at 11:08:30
```

```

[shm2:~]$ impdp directory=shm2_dir dumpfile=ts20000.dmp transport_datafiles='/u01/app/oracle/oradata/shm2/disk1/ts20000.dbf'

Import: Release 11.2.0.1.0 - Production on Mon Feb 26 10:37:22 2024

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Username: sys as sysdba
Password:

Connected to: Oracle Database 11g Enterprise Edition Release 11.2.0.1.0 - Production
With the Partitioning, OLAP, Data Mining and Real Application Testing options
Master table "SYS"."SYS_IMPORT_TRANSPORTABLE_01" successfully loaded/unloaded
Starting "SYS"."SYS_IMPORT_TRANSPORTABLE_01": sys/***** AS SYSDBA directory=shm2_dir dumpfile=ts20000.dmp transport_datafiles=/u01/app/oracle/oradata/shm2/disk1/ts20000.dbf
Processing object type TRANSPORTABLE_EXPORT/PLUGTS_BLK
Processing object type TRANSPORTABLE_EXPORT/TABLE
Processing object type TRANSPORTABLE_EXPORT/POST_INSTANCE/PLUGTS_BLK
Job "SYS"."SYS_IMPORT_TRANSPORTABLE_01" successfully completed at 10:37:33

```

#### 8. PROD DB에서 ts30000 테이블 스페이스를 read write 로 변경합니다.

```

PROD SYS >
alter tablespace ts30000 read write;

```

```

PROD SYS > alter tablespace ts30000 read write;

```

Tablespace altered.

```

PROD SYS >
PROD SYS > select t.name, d.enabled
            from v$tablespace t, v$datafile d
            where t.ts# = d.ts#;  2      3

```

NAME	ENABLED
-----	-----
SYSTEM	READ WRITE
SYSAUX	READ WRITE
UNDOTBS	READ WRITE
TEST100	READ WRITE
EXAMPLE	READ WRITE
TEST100	READ WRITE
TEST100	READ WRITE
TS100	READ WRITE
SHM	READ WRITE
INSA01	READ WRITE
HR01	READ WRITE

NAME	ENABLED
-----	-----
TS501	READ WRITE
TS501	READ WRITE
TEST5000	READ WRITE
TS7000	READ WRITE
INSA02	READ WRITE
UNDOTBS7	READ WRITE
SMALL_UNDO	READ WRITE
UNDOTBS9	READ WRITE
SYSTEM	READ WRITE
SYSAUX	READ WRITE
TS50	READ WRITE

NAME	ENABLED
-----	-----
TS5000	READ WRITE
EXAMPLE	READ WRITE
EXAMPLE	READ WRITE
TS7100	READ WRITE
TS8100	READ WRITE
TS20000	READ WRITE
TS30000	READ WRITE

29 rows selected.

```
PROD SYS > alter tablespace ts30000 read write;
Tablespace altered.

PROD SYS >
PROD SYS > select t.name, d.enabled
             from v$tablespace t, v$datafile d
             where t.ts# = d.ts#; 2      3
```

NAME	ENABLED
-----	-----
SYSTEM	READ WRITE
SYS_AUX	READ WRITE
UNDOTBS	READ WRITE
TEST100	READ WRITE
EXAMPLE	READ WRITE
TEST100	READ WRITE
TEST100	READ WRITE
TS100	READ WRITE
SHM	READ WRITE
INSA01	READ WRITE
HR01	READ WRITE

NAME	ENABLED
-----	-----
TS501	READ WRITE
TS501	READ WRITE
TEST5000	READ WRITE
TS7000	READ WRITE
INSA02	READ WRITE
UNDOTBS7	READ WRITE
SMALL_UNDO	READ WRITE
UNDOTBS9	READ WRITE
SYSTEM	READ WRITE
SYS_AUX	READ WRITE
TS50	READ WRITE

NAME	ENABLED
-----	-----
TS5000	READ WRITE
EXAMPLE	READ WRITE
EXAMPLE	READ WRITE
TS7100	READ WRITE
TS8100	READ WRITE
TS20000	READ WRITE
TS30000	READ WRITE

29 rows selected.

9. PROD DB에서 emp30000테이블이 잘 조회되는지 확인합니다.

```
PROD SYS >
connect scott/tiger

PROD SCOTT >
select count(*) from emp30000;
```



```

PROD SYS > connect scott/tiger
Connected.
PROD SCOTT > select count(*) from emp30000;

COUNT(*)
-----
        14

```

10. PROD DB에서 ts30000 테이블 스페이스를 read write로 변경합니다.

```

PROD SYS >
alter tablespace ts30000 read write;

```

```

shn2 SYS > alter tablespace ts30000 read write;
Tablespace altered.

```